REMARKS/ARGUMENTS

Applicants have received the Office action dated September 27, 2004, in which the Examiner: 1) rejected claims 1-8, 10-11 and 14-18 as allegedly anticipated by Drottar et al. (U.S. Pat. No. 6,646,991); and 2) objected to claims 9 and 12-13 as "being dependent upon a rejected base claim, but would be allowable if rewritten in independent form... ."

With this Response, Applicants amend claims 1, 6, 9-10, 12 and 14. Reconsideration is respectfully requested.

I. AMENDMENTS TO THE SPECIFICATION

With this Response Applicants present a plurality of amendments to the specification. Each of these amendments is to obviate any interpretation from the specification regarding what one of ordinary skill may have known prior to the benefit of reading the current specification. No new matter is presented.

II. ALLOWABLE SUBJECT MATTER

The Office action dated September 27, 2004 indicates that claims 9 and 12-13 would be allowable if rewritten in independent form. With this Response, Applicants amend claims 9 and 12 to be in independent form, including the limitations of the base claims and any intervening claims. Claim 13 depends from claim 12. Further, Applicants amend claim 9 to address the objection presented. Thus, claims 9 and 12-13 should be in a condition for allowance.

III. CLAIM REJECTIONS

A. Claim 1

Claim 1 stands rejected as allegedly anticipated by Drottar. Applicants amend claim 1 to more clearly define over Drottar's skew management.

Drottar is directed to multi-line extensions and bundle skew management. (Drottar Title). This dual aspect of the disclosure is highlighted in Drottar's summary:

> [A] method of combining multiple parallel links between a server's CPU and its I/O system into a single channel is provided. The various links of the bundle are handled in a round-robin order. **Variations in flight time between the various links are**

> **compensated for through a timer at each receive port of the bundle.**

(Drottar Summary (emphasis added)). Drottar's Figure 6, reproduced immediately below, is illustrative of the Drottar system:

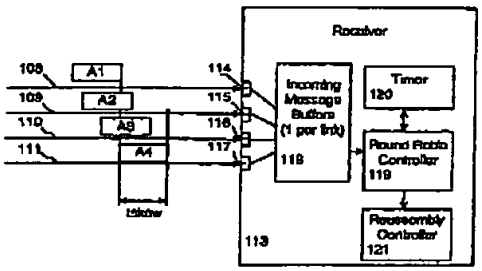

Fig. 6

In particular, and with regard to bundle skew management, Drottar introduces a time interval T_{skew} within which an expected cell on expected link may arrive, in spite of unexpected cell arrivals on a different links, and yet the reception is still valid.

> FIG. 6 is a block diagram of a reception in round-robin fashion over bundled links in which the reception has been skewed but remains valid according to on [sic] embodiment of the present invention. **Here, port 114 is at the top of the round-robin order.** Cells A4, A3, and A2 all arrive before A1 but the reception is still valid because A1 arrived before the expiration of the tskew timer, 120. A tskew failure occurs when the expected receive port tskew window is exceeded. This failure can only occur in a link which drops a cell.

(Drottar Col. 4, lines 33-40 (emphasis added)).

Claim 1, by contrast, specifically recites, "a receiver configured to receive a plurality of channels; a receiver logic circuit configured to receive signals from each of the plurality of channels and monitor the signals for symbols that are unique to each channel... ." In Drottar, the cells received are not "unique to each channel"; rather, in Drottar the cells are assigned to each link in a round-robin fashion. (Drottar Col. 4, lines 33-40). For this reason alone, Drottar does not

teach or fairly suggest the limitations of claim 1, and thus the claim should be allowed.

Claim 1 further specifically recites, "wherein upon detecting a symbol on an incorrect a channel, the receiver logic circuit is configured to correct the order of the channels." In Drottar, **only the order of arrival of cells is changed.** Drottar does not teach or fairly suggest that "wherein upon detecting a symbol on an incorrect a channel, the receiver logic circuit is configured to correct the order of the channels." The advantage of such a system is that if channels are crossed during layout or physical installation, this may be taken care of by way of the receiver. (Specification, Page 13, lines 20-22).

Based on the foregoing, Applicants respectfully submit that claim 1, and all claims which depend from claim 1 (claims 2-8) should be allowed.

B. Claim 6

Claim 6 stands rejected as allegedly anticipated by Drottar. Applicants amend claim 6 to more clearly define over dropped cells of Drottar.

Claim 6 specifically recites, "wherein the received symbols are insensitive to signal inversion." In rejecting claim 6, the Office action of September 27, 2004 attempts to rely on the failed arrival of cells. However, claim 6 specifically recites "received symbols," and thus the cells which fail to arrive in Drottar, and any action taken thereon, do not teach or fairly suggest "received symbols are insensitive to signal inversion."

Claim 6 is allowable for at least the same reasons as claim 1, from which it depends, as well as the additional limitations therein.

C. Claim 10

Claim 10 stands rejected as allegedly anticipated by Drottar. Applicants amend claim 10 to more clearly define over Drottar's skew management.

Drottar is directed to multi-line extensions and bundle skew management. (Drottar Title). Drottar's Figure 6, reproduced above, is illustrative of the Drottar system. In particular, and with regard to bundle skew management, Drottar introduces a time interval T_{skew} within which an expected cell on expected link

may arrive, in spite of unexpected cell arrivals on a different links, and yet the reception is still valid. (Drottar Col. 4, lines 33-40).

Claim 10, by contrast, specifically recites, "transmitting symbols across the plurality of channels, wherein the symbols are unique to each channel... ." In Drottar, the cells received are not "unique to each channel"; rather, in Drottar the cells are assigned to each link in a round-robin fashion. (Drottar Col. 4, lines 33-40). For this reason alone, Drottar does not teach or fairly suggest the limitations of claim 10, and thus the claim should be allowed.

Claim 10 further recites, "ordering at least two channels on which unique symbols arrive so that the unique symbols arrive at respective predetermined buffers." In Drottar, **only the order of arrival of cells is changed**. Drottar does not teach or fairly suggest "ordering at least two channels on which unique symbols arrive so that the unique symbols arrive at respective predetermined buffers." The advantage of such a system is that if channels are crossed during layout or physical installation, this may be taken care of by way of the receiver. (Specification, Page 13, lines 20-22).

Based on the foregoing, Applicants respectfully submit that claim 10, and claim 11 which depend from claim 10, should be allowed.

D. Claim 14

Claim 14 stands rejected as allegedly anticipated by Drottar. Applicants amend claim 14 to more clearly define over Drottar's skew management.

Drottar is directed to multi-line extensions and bundle skew management. (Drottar Title). Drottar's Figure 6, reproduced above, is illustrative of the Drottar system. In particular, and with regard to bundle skew management, Drottar introduces a time interval T_{skew} within which an expected cell on expected link may arrive, in spite of unexpected cell arrivals on a different links, and yet the reception is still valid. (Drottar Col. 4, lines 33-40).

Claim 14, by contrast, specifically recites, "a first device having a first adapter; a second device having a second adapter coupled to the first adapter by a communications link having one or more serial lanes, the second adapter having a multilane transmit path and a multilane receive path, wherein the

multilane receive path includes a lane reorder circuit configured to reorder arrival lanes of the multilane receive path if misordering is detected." Drottar is concerned only with reordering arrival times, not "reorder[ing] arrival lanes of the multilane receive path if misordering is detected." Thus, Drottar does not teach or fairly suggest the limitations of claim 14.

Based on the foregoing, Applicants respectfully submit that claim 14, and all claims which depend from claim 14 (claims 14-18), should be allowed.

E. Claim 15

Claim 15 stands rejected as allegedly anticipated by Drottar.

Claim 15 specifically recites, "a reconstruction circuit configured to retrieve symbols from the plurality of receive buffers to form an output sequence of received symbols, wherein the reconstruction circuit is configured to examine lane identifier symbols in training packets received via the communications link to detect misordering of the lanes." The Office action dated September 27, 2004 attempts to rely on skipped cells to anticipate training packets. However, the claim specifically calls out that the "reconstruction circuit is configured to examine lane identifier symbols in training packets received... ." Applicants respectfully submit that Drottar's "skipped cells" (that is, cells not received (Drottar Col. 4, line 40)) cannot be the "training packets" examined by the reconstruction logic.

Claim 15 is dependent from claim 14 and is allowable for at least the same reasons, as well as the additional limitations therein.

IV. CONCLUSION

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the cited art which have yet to be raised, but which may be raised in the future.

Appl. No. 09/597,190
Amdt. dated December 7, 2004
Reply to Office action of September 27, 2004

Applicants respectfully request reconsideration and that a timely Notice of Allowance be issued in this case. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,

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